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**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL SEARCH REPORT**  
(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 031392PC	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/AU2004/001800</b>	International filing date (day/month/year) 21 December 2004	(Earliest) Priority Date (day/month/year) 23 December 2003
Applicant <b>PROGEN INDUSTRIES LIMITED et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.
2. ☒ Certain claims were found unsearchable (See Box No. II).
3. ☐ Unity of invention is lacking (See Box No. III).
4. With regard to the title,
- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:
5. With regard to the abstract,
- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. With regard to the drawings,
- a. the figure of the drawings to be published with the abstract is Figure No.
- ☐ as suggested by the applicant.
- ☐ as selected by this Authority, because the applicant failed to suggest a figure.
- ☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☒ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001800

**Box No. II** Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1, 3 (in part)  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
See supplemental box
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

**Box No. III** Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest:  
☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001800

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>														
Int. Cl. <sup>7</sup> : C07H 5/10, 13/12, 15/04, 11/04, 15/18; A61K 31/70, 31/7012, 31/7016, 31/7028; A61P 7/00, 7/02, 29/00, 35/00, 31/00, 43/00														
According to International Patent Classification (IPC) or to both national classification and IPC														
<b>B. FIELDS SEARCHED</b>														
Minimum documentation searched (classification system followed by classification symbols)														
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched														
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CAS online, WPIDS: Substructure Search														
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>														
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.												
X	WO 1985/000973 A1 (AMERICAN CYNAMID COMPANY) 14 March 1985 See whole document especially formulae I and II, claims	1, 3, 4-10, 12, 13												
X	US 4459293 (MINER THOMAS G et al) 10 July 1984 See whole document	1, 3, 4-10, 12, 13												
X	WO 2003/038054 A2 (NEW YORK UNIVERSITY) 8 May 2003 See structures I-VI	1												
X	Derwent Abstract Accession No 2000-100762/09 Class B03 D16 JP 11-315092 (AGENCY OF IND SCI & TECH) 16 November 1999	1, 3, 4												
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex														
<table border="0"> <tr> <td>* Special categories of cited documents:</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"&amp;" document member of the same patent family</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td></td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family	"O" document referring to an oral disclosure, use, exhibition or other means		"P" document published prior to the international filing date but later than the priority date claimed	
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"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone													
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art													
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family													
"O" document referring to an oral disclosure, use, exhibition or other means														
"P" document published prior to the international filing date but later than the priority date claimed														
Date of the actual completion of the international search 7 March 2005		Date of mailing of the international search report 11 MAR 2005												
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  O.L. CHAI Telephone No : (02) 6283 2482												

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/AU2004/001800

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Derwent Abstract Accession No 2001-337999/36 Class B03 JP 2001048857 (ONO PHARM CO LTD) 20 February 2001	1, 4-10, 14
X	Derwent Abstract Accession No 2000-116716/10 Class B03 WO 1999/065480 (ONO PHARM CO LTD) 23 December 1999 (US 2004/0072767 viewed)	1, 3, 4
X	WO 1993/024506 A1 (ALBERTA RESEARCH COUNCIL) 9 December 1993 See whole document	1, 4-10, 12
X	WO 1997/018222 A2 (GLYCOMED INC) 22 May 1997 See whole document	1, 3, 4-10, 12
X	Derwent Abstract Accession No 96-116981/12 Class B03 WO 1996/003413 (GENYME UK LTD) 8 February 1996	1, 3
X	US 5700918 (HASEGAWA et al) 23 December 1997 See whole document	1, 4-10, 12, 14
P, X	Chemical Abstracts AN 140:314439 & Bytheway, Ian et al, "Validation of Molecular Docking Calculations Involving FGF-1 and FGF-2" Journal of Medicinal Chemistry (2004), 47(7), 1683-1693 See RN 679418-23-6, 679418-24-7	1, 3
P, X	Chemical Abstracts AN 141:54554 & Liu, Ligong et al, "Application of the four-component Ugi condensation for the preparation of sulfated glycoconjugate libraries" Bioorganic & Medicinal Chemistry Letters (2004), 14(9), 2221-2226 See RN 705951-30-0, 705951-31-1, 705951-32-2, 705951-33-3, 705951-34-4, 705951-35-5, 705951-36-6, 705951-37-7, 705951-38-8, 705951-39-9, 705951-40-2, 705951-41-3	1, 3
X	Chemical Abstracts AN 138:82903 & Yoshiizumi, Kazuya et al, "Studies on scavenger receptor inhibitors. Part 1: synthesis and structure-activity relationships of novel derivatives of sulfatides" Bioorganic & Medicinal Chemistry (2002), 10(8), 2445-2460 See RN 485323-47-5	1, 3, 4
X	Chemical Abstracts AN 133:267051 & Faroux-Corlay, B. et al, "Synthesis of single- and double-chain fluorocarbon and hydrocarbon galactosyl amphiphiles and their anti-HIV-1 activity" Carbohydrate Research (2000), 327(3), 223-260 See RN 298712-98-8	1, 3, 4
X	Chemical Abstracts AN 131:322848 & Sakagami, Masahiro et al, "Syntheses and evaluation of biantennary oligosaccharide ligands mimicking Sialyl Lewis X" Chemical & Pharmaceutical Bulletin (1999), 47(9), 1237-1245 See RN 167016-70-8	1, 4-10, 12

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001800

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Chemical Abstracts AN 129:107414 & Mulligan, Michael S. et al, "In vitro and in vivo selectin-blocking activities of sulfated lipids and sulfated sialyl compounds" International Immunology (1998), 10(5), 569-575 See RN 209860-41-3	1, 4

## INTERNATIONAL SEARCH REPORT

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**Supplemental Box**

(To be used when the space in any of Boxes I to VIII is not sufficient)

**Continuation of Box No: II**

The permutations and combinations of the various variables of the structural formula I of claim 1 give many classes of compounds that the specification does not provide support for. The claim is also drafted so unclearly that the scope of the claim cannot be determined. Attempts have been made to conduct a search of the compounds covered by claim 3. It was economically not possible to retrieve all related documents due to the large number of closely related compounds from the substructure searches. Only a selection of the prior art has been cited in Box C.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/001800

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	1985/000973	EP	0153393	US	4515782
US	4459293	US	4404365		
WO	2003/038054				
JP	99315092				
JP	2001048857				
WO	1999/065480	AU	41665/99	EP	1095653
WO	1993/024506	CA	2110386	CA	2110495
		CA	2110707	CA	2110997
		CA	2118522	EP	0588848
		EP	0589933	EP	0589951
		EP	0591256	EP	0643718
		US	5352670	US	5374655
		US	5580858	US	5646123
		US	5872096	US	5882901
		WO	1992/022301	WO	1992/022563
		WO	1992/022565	WO	1992/022661
		WO	1993/024505	WO	1992/022564
				WO	1992/022662
WO	1997/018222	AU	11228/97	US	5874411
WO	1996/003413	AU	32236/95	CA	2194492
		US	5874548	EP	0772618
US	5700918	WO	1995/026970		
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					

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